

Appl. No. 09/772,484
Amdt. Dated August 17, 2004
Reply to Office Action of June 9, 2004

REMARKS

Claims 1 through 16 remain pending in this application. Claims 1, 2, 6, 9, 14 and 16 have each been amended.

5 In paragraph 1 of the Office Action, Claims 6 and 9 stand objected due to informalities that require appropriate correction. Applicant has made the appropriate correction according to the changes suggested by the Examiner. Applicant requests that the objection to Claims 6 and 9 be withdrawn.

10 The present invention is directed to a camera system and method of operating the same. The camera system of the present invention uses computer vision to analyze a video sequence and make recommendations that can be implemented by the camera operator in either an electronic pan-tilt-zoom (EPTZ) or a mechanical pan-tilt-zoom (MPTZ) mechanism. The camera system comprises a central processing unit for 15 automatically controlling the camera or recommending settings to a user or operator. The camera system can be configured to use an EPTZ or MPTZ mechanism. The central processing unit compares the cinematographic parameters of a captured camera view with reference cinematographic parameters. The central processing unit thereafter generates data that defines recommended camera operation to improve the

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overall quality of the view. The camera automatically implements the recommended camera operation unless overridden by the user for manual operation.

Referring to the Office Action, Claims 1-15 stand rejected as anticipated by
5 Suzuki (U.S. Pat. 5,831,670). The Office Action states that Suzuki teaches a method of
operating a camera system comprising "the steps of providing a camera system (figure
1) comprising camera and a central processing unit (Figure 1: 1), capturing a view of a
subject with the camera (col. 4 lines 24-28), determining the cinematographic
parameters of the view (figure 20: 3-7), comparing the determined cinematographic
10 parameters to reference cinematographic parameters (figure 22: step S11, step S22
and step S23), formulating recommended camera operation based on the comparison
of the determined cinematographic parameters to the reference cinematographic
parameters (figure 22: steps S31 and S32) and indicating the recommended camera
operation to the user (figure 21)." The rejection is hereby traversed and reconsideration
15 is respectfully requested.

There are several material differences that may be observed between Suzuki
and the claimed invention. First, it will be observed that the Suzuki system relies on
using sensors to measure external conditions (i.e., distance, focal length, attitude of the
20 camera, line of sight and photometric readings) of the view being taken by the camera.
There is no teaching or disclosure in Suzuki as to effecting determination of the
cinematographic parameters of the shot or view defined by the actual video data

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received from the camera as taught by Applicant. The CPU functions to determine and generate the parameters directly from the view shot and compare the parameters to reference parameters stored therein.

5 Second, it will be also observed that Suzuki relies on the user to make the necessary changes to comply with the warning signals from a composition quality estimation circuit indicating poor composition. Applicant teaches and claims a camera system that is capable of comparing cinematographic parameters from a view or shot with reference cinematic parameters, whereby if the quality of the shot is deemed low
10 by the camera system, it generates photographic recommendations that will address particular deficiencies determined by the comparison step. The camera automatically implements the recommendations through suitable automated means. For example, the camera may be configured as an EPTZ camera and the recommended camera operation defines a new or next view that should be captured, that particular new or
15 next view appears in the viewfinder of the camera. Alternatively, the camera may be configured as a MPTZ camera wherein the recommendations are converted into control signals that are used to control the motors of the camera to facilitate capture of the recommended view or shot. The recommended camera operation can provide the user with the opportunity to manually override the recommendation as desired. The Suzuki
20 reference fails to teach these aspects of the present invention, and thus fails to anticipate the present invention as claimed.

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The camera taught by Suzuki is therefore materially different from the present camera system as claimed. Accordingly, in view of the above remarks, claims 1 to 15, as now presented, are patentable over Suzuki. More specifically, independent claims 1, 14, and 16 have each been amended to include EPTZ or MPTZ operation of the camera. This additional new claimed feature, and other embodiments as discussed herein, are clearly not taught in Suzuki. Claims 2–13 are each ultimately dependent from claim 1 (currently amended), and are patentable for at least the same reasons as claim 1 (currently amended). Similarly, claim 15 is dependent from and patentable for at least the same reasons as claim 14 (currently amended).

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Referring again to the Office Action, claim 16 stands rejected as anticipated by, or alternatively, as obvious over Suzuki. The Office Action states that the only difference between the Suzuki camera and Applicant's camera system is the use of a computer processor for storing and reading the code for the method implemented in claim 1. The Office Action concludes that it would have been obvious to have a computer processor for storing and reading the code in order to transfer the code to any other image input apparatus so as to implement it on other devices. The rejection is hereby traversed and reconsideration is respectfully requested. The remarks made in response to the above anticipation rejection are also applicable herein.

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As previously indicated, Suzuki discloses a camera capable of measuring the external conditions making up the view and making recommendations to the user as to

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modify and enhance the quality of the view. The present invention, as claimed in claim 16 (currently amended), includes a camera being selectively configured for using either an electronic pan-tilt-zoom (EPTZ) mechanism or a mechanical pan-tilt-zoom (MPTZ) mechanism for controlling pan, tilt and zoom, whereby the camera can utilize a 5 computer processor readable program code configured to operate the selected EPTZ or MPTZ configured camera to implement the recommended camera operation. These features as claimed are absent in Suzuki. There is no motivation or suggestion in the prior art to modify the Suzuki camera to include the electronic pan-tilt-zoom (EPTZ) mechanism or a mechanical pan-tilt-zoom (MPTZ) mechanism for controlling pan, tilt 10 and zoom because the reference specifically requires the user to manually change the view or shot of the camera. One of ordinary skill in the art, based on the cited reference, therefore cannot arrive at the claimed invention . Suzuki teaches away from the present invention as now claimed. Clearly, claim 16 (currently amended) is not anticipated or made obvious by Suzuki. Applicant has also shown that claims 1-15 as 15 now presented are not anticipated or made obvious by the cited references.

In view of the foregoing, Applicant submits that claims 1-16 as now presented are each in condition for allowance, and early passage to issue is therefore deemed proper and respectfully requested.

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It is believed that no additional fee is due. However, if any additional fee is due, it should be charged to Deposit Account No. 23-0510.

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Respectfully submitted,



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